

NRM 211
INTRODUCTION TO APPLIED PLANT SCIENCE
Fall – 2014

Schedule:

<i>Lectures:</i>	Monday, Wednesday	9:15AM - 10:15AM	AHRB 183
<i>Labs:</i>	Monday	2:15PM - 5:00 PM	AHRB 1W05

Course Objective:

To guide students to an understanding of the physiological processes controlling plant growth and development emphasizing the implications and applications for plant growth and production at high latitudes.

Expected Student Outcome:

Enable students to apply current scientific knowledge to effectively handle and understand plant growth under existing environmental conditions, management procedures and infrastructures. Provide students with the ability to recognize and appreciate opportunities and challenges for efficient plant and crop production under northern conditions.

Instructor:

Evaluation Policy:

Grades will be based on exams, plant identifications, several sets of lab questions, one lab activities report, one literature review,

In collaboration with UAF Office of Disability Services, 208 Whitaker Bldg. (across from Wood Center), 474-5655 or uaf-disabilityservices@alaska.edu, reasonable accommodations will be made to assist students with documented disabilities.

Lab and Plant ID Tests:

The first part of the Lab and plant ID tests on October 6 and November 10 consists of questions from lab exercises. These questions will constitute 20% or 30 points of the 150 possible points. The second part is identification of plants in form of pictures, pressed samples or live plant material. Common names and scientific names (correctly spelled) are required for each plant. The plant ID includes 6 groups of plants (agronomy crops; undesired plants in crop production commonly referred to as weeds; native Alaska plants for ornamental and revegetation purposes; vegetables; herbaceous ornamentals; fruit and berry crops) for a total of 100 species.

Lab Questions:

In addition to the lab activities report (see below), there are several weekly sets of lab questions. The questions are related to the most important concepts covered in the lab. The answered lab questions are due at the end of the lab period and will be administered for lab I, II, III, IV, VI, VII, VIII, IX, XI and XII.

Lab Activities Report:

One lab activities report describing effects of temperature, light and mineral nutrition on plant growth is required. The plants will be growing in the greenhouse throughout the semester with opportunities to make weekly observations and measurements. The report is due (at the latest) on November 19, 2014.

Format for Lab Report on temperature and light (see example on Blackboard)

Procedures:

- Describe equipment, materials, methods etc.
- Describe treatments.
- Describe how data were collected.

Results:

Report your observations. The lab report must have actual plant measurements presented in tables and/or graphs.

Discussion and Conclusions:

- Summarize in words the data presented under the results.
- Discuss the obtained results. Do they differ from expected results?
- Make a few concluding remarks.

Literature Review:

One literature review based on a paper from a scientific journal covering a research study related to the development and management of a crop or plant system is required. In addition to the written review, a short presentation of the paper (less than 10 minutes) is expected

Are the authors' conclusions valid? Who would benefit from this information? What additional work should be done? What would you have done differently? Any other comments.

NRM 211-Fall 2014, tentative schedule (pages Bidlack and Jansky, 2014. Stern's Introductory Plant Biology, **13th ed.**)

M	Sept. 8	Course introduction.	p. 2-12
M	Sept. 8	Lab I: Field production	
W	Sept. 10		